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about an inch, both vanes being widely bordered with black externally. The whole plumage, both above and below, excepting of course the black of wings and tail, is much lighter—almost pure white—than in examples of *T. personata* from other localities. Size of *T. personata*.

Type, No. 30,489, Am. Mus. Nat. Hist., New York City.

HABITAT. Headwaters of the Napo, Ecuador.

In *T. personata*, the only species with which this need be compared, the black of the head is restricted to the chin, the malar region, the anterior half of the ear-coverts, and a broad band behind and above the eyes, joining the black of the front of the head, which extends from the base of the bill to a line about opposite to the middle of the orbits. In *T. nigriceps* the black covers the whole throat and head, extending to the nape, and including the whole of the auricular region. The nape is also black, with the feathers in part edged with white. The black of the head is thus quite as extended as in *T. cayana*, with the addition of a *wholly black throat*.

The material examined in this connection numbers 112 specimens, representing, in good series, all the known species of the genus. In this connection I desire to acknowledge my indebtedness to the kind offices of Mr. Robert Ridgway in sending me for examination the specimens of *Tityra* contained in the U. S. National Museum.



THE JACANIDÆ.

BY D. G. ELLIOT, F. R. S. E.

MY material for this review has been obtained from the following sources. The Jacanidæ in the general collection of the American Museum of Natural History, New York, specimens from the Lawrence collection and those of Messrs. Smith and Rusby, also in the Museum. From Boston I have received specimens from the Boston Society of Natural History, and Mr. C. B. Cory; and also all the specimens in the National Museum at Washington, amounting altogether to about one hundred examples, quite

sufficient to enable satisfactory conclusions to be reached. I would express my thanks to Messrs. Henshaw and Cory and Professors Goode and Ridgway, for the assistance given.

The following are the chief points in the literature of the family:

1758. LINNÆUS, *Systema Naturæ*. In the genus *Fulica*, comprising species of various genera, the Jacana from Carthage, without pendent wattles, and tri-lobed frontal wattles, is named *Fulica spinosa*. Species 1.

1766. LINNÆUS, *Systema Naturæ*, 12th ed. In the genus *Parra* two Jacanas are described, the bird from Brazil as *P. jacana*, and *P. variabilis* (= *P. spinosa*). . . . Species 2.

1786. SCOPOLI, *Deliciæ Floræ et Faunæ Insubricæ*. Under the genus *Tringa* a Jacana is described as *T. chirurgus*.

Species 3.

1788. GMELIN, *Systema Naturæ*. Eight species of Jacana are here given under *Parra*, two for the first time, viz., *P. nigra* and *P. africana*. The others are *P. jacana* Linn., *P. brasiliensis* and *P. viridis* (= *P. nigra*), *P. variabilis* (= *P. spinosa* Linn.), *P. luzoniensis*, and *P. sinensis* (= *T. chirurgus* Scop.) Species 5.

1790. LATHAM, *Index Ornithologicus*. The list of *Parra* here given is but a repetition of that of Gmelin, except that one species, *P. indica*, is described for the first time. . . Species 6.

1817. VIEILLLOT, *Nouveau Dictionnaire d'Histoire Naturelle*. The list of *Parra* of this author is the same as those of Gmelin and Latham, save that he renames the *P. indica*, *P. cristata*.

1820-1839. TEMMINCK, *Planche Coloriées*. One new species is here described as *P. gallinaceus*. Species 7.

1832. GEOFF. ST. HILAIRE, in *Magazin de Zoologie*. *Parra albinucha* is first described. Species 8.

1832. LESSON, *Traité Ornithologie*. *Ƴ. spinosa* is renamed *P. cordifera*.

1832. WAGLER, *Isis*. In this publication *Ƴ. spinosa* is renamed *P. gymnostoma*, and three genera are proposed for these birds: *Hydrophasianus* for *P. chirurgus* Scop.; *Metopidius*, containing *P. africana* and *P. ænea* (= *P. indica* Lath.). (As the first named has the front and top of head bare and no wattle, it cannot be classed in the same genus with *P. indica* which

has a feathered head, and a broad, upright, frontal wattle) ; and *Hydralector*, for *P. gallinaceus* Temm.

1844-1849. G. R. GRAY, *Genera of Birds*. In this work we have the Jacanas placed in the subfamily Parrinæ of the family Palamedeidæ, order Grallæ. Fourteen species are enumerated under *Parra*, of which four are marked doubtful, and one is given for the first time, *P. hypomelæna* (= *P. nigra* Gmel.). One of the species is marked with a ? —The species given besides these are *P. jacana* Linn., *P. viridis* and *P. brasiliensis* Gmel. (= *P. nigra* Gmel.), *P. gymnostoma* Wagl. and *P. cordifera* Less. (both = *P. spinosa* Linn.), *P. africana* Gmel., *P. capensis* Smith, *P. albinucha* St. Hil., *P. indica* Lath., *P. cristata* Vieill.) = *P. indica* Lath.), *P. gallinacea* Temm., and *P. chilensis* Molina, which belongs to the genus *Vanellus* auct.

1849. SIR A. SMITH, *Illustrations of the Zoology of South Africa. Aves.* *P. capensis* first described. . . Species 9.

1856. P. L. SCLATER, in *Proceedings of the Zoological Society of London*. A review of the American species of this family is here given. Five are enumerated—*P. jacana* Linn., *P. intermedia* Bonap. (= *P. jacana* Linn.), *P. melanopygia* Sclat. and *P. hypomelæna* Gray (both = *P. nigra* Gmel.), and *P. gymnostoma* Wagl. (= *P. spinosa* Linn.).

1878. RAMSAY, *Transactions Linnean Society of New South Wales.* *Hydralector gallinaceus*, described as *Parra novæguineæ*.

1881. C. B. CORY, in *Bulletin Nuttall Ornithological Club.* *J. spinosa* from Haiti described as *P. violacea*.

CLASSIFICATION.

Formerly the Jacani

dæ were usually associated with the Ralli

dæ, but through the researches of competent comparative avian anatomists, notably the late Messrs. Garrod and Forbes, it has been pretty conclusively shown that the Jacanas are much more nearly related to the Plovers. Nitzsch in his 'Pterylography,' associates the *Jacana* with the genera *Rallus*, *Crex*, and *Porphyrio*, although they differ from all of these in having ten rectrices instead of twelve ; while the bands of the dorsal tract behind the shoulder blades are narrowed remarkably, and the pelvic portion is dilated. The lumbar tracts are weak and united by sparse contour feathers to the uropygial portion of the dorsal

tract. The skulls of the Jacaniidæ are schizorhinal, with well-developed basipterygoid processes; the vomer is apically emarginate; no trace of occipital fontanelles, and the supraorbital impressions are absent. The pelvis exhibits its Limicoline affinities by having the ilia wider, and more expanded anteriorly, by having hardly any median projection on the postacetabular ridge, and by being widest dorsally behind the antitrochanters. Between the ischia and sacrum the bony plates are narrower, and the posterior part of the renal fossæ more open. In certain species which have the metacarpal spur less developed and blunt, the radius for its distal half is dilated and flattened into a lamellar-like expansion. About half of this radius is bare of muscle, and the margin slightly roughened, and doubtless the bird is capable of striking a severe blow with this scimitar-shaped bone. In the species where the 'spur' is long and sharp, the radius is of the usual form. Viewed anatomically, the Jacanas possess no crop, but a muscular gizzard, the epithelium lining of which is hard and thick. The gall bladder is well developed; and the cæca are very small, their length to that of the intestines being 2 (*J. jacana*) and 15 in. (*H. chirurgus*) to 12 inches. It will thus be seen that in many particulars the Jacaniidæ differ from the Rallidæ, and approach the Limicolæ; but they possess sufficient characteristics peculiar to themselves to constitute a distinct Family, with the Charadriidæ as its nearest relatives.

The Jacanas are characterized by narrow, rather long, pointed bills; the nostril oblong, lateral, open, placed about midway in the maxilla. Moderately long necks. Body small. Wings armed with a metacarpal spur, in some species well-developed and sharp, in others blunt, or rudimentary. Head usually adorned with a wattle of various shapes. Legs long and slender, toes enormously lengthened with extremely long claws, that on the hallux being often three times greater in length than the toe. With these large feet, their passage over floating plants and weeds is made expeditious and easy.

GENERA.

Fortunately but few generic terms have been applied to these birds, but the one not entitled to priority has been used by nearly all ornithological writers from the time of Linnæus to the present

day.* Brisson first instituted a genus '*Jacana*' for the Jacanas and gave very good descriptions of those he considered especially distinct. Six years after, Linnæus, in his 12th edition, utterly ignored Brisson's genus, as in fact he did his own previous writings, and bestowed the generic term *Parra* upon these birds, and this is the name that has, quite erroneously, been employed ever since. It must, however, give way to that of Brisson. The Jacaniidæ are properly divided into five genera, characterised chiefly by the presence or absence of wattles, their shape, and the bare or feathered head.

List of Genera.

1760. *Jacana* BRISSON, Ornith. Vol. V, p. 121. Type, *Fulica spinosa* Linn.

1766. *Parra* LINNÆUS, Syst. Nat. Vol. I, p. 259 (*passim*). Type, *Parra jacana* Linn.

1832. *Hydrophasianus* WAGLER, Isis, p. 279. Type, *Tringa chirurgus* Scop.

1832. *Metopidius* WAGLER, Isis, p. 279. Type, *Parra africana* Gmel.

1832. *Hydralector* WAGLER, Isis, p. 279. Type, *Parra gallinaceus* Temm.

1842. *Diplopteryx* GLOGER, Handb. u. Hilfschb. Naturg. Type, *Tringa chirurgus* Scop.

1888. *Aphalus* ELLIOT, gen. nov. Type, *Parra capensis* Smith.

Key to the Genera and Species.

A. Tail short; primaries normal.

a. Head with an upright fleshy wattle on forehead.....JACANA.

a'. Narrow pendent wattles at base of mandible.

Frontal wattle bi-lobed.

a''. Back and wings chestnut.....*J. jacana*.

b''. Back and wings black, glossed with purple.....*J. nigra*.

b'. Without pendent wattles.

a''. Frontal wattle tri-lobed. Back and wings
purplish chestnut.....*J. spinosa*.

b''. Frontal wattle rounded. Back and wings
pale greenish bronze.....*J. indica*.

b. No wattles.

a'. Forehead bare.....METOPIDIUS.

* Stejneger; Auk, II, 1885, p. 338.

- a''*. Back of neck white, sides and front of neck black.....*M. albinucha*.
- b''*. Back of neck black, sides and front of neck white.....*M. africanus*.
- c'*. Forehead feathered.....*APHALUS*.
- a''*. Forehead yellow; crown and nape, reddish orange.....*A. capensis*.
- d'*. Head with fleshy shield and narrow upright fleshy membrane over culmen to nostrils. *HYDRALECTOR*.
- a''*. Nape and back of neck black; sides of face golden yellow.....*H. gallinaceus*.
- B*. Central tail-feathers very long; primaries attenuated.....*HYDROPHASIANUS*.
- a*. Head, face, and fore neck, white; nape and stripe on sides of neck, black; hind neck, golden yellow.....*H. chirurgus*.

GEOGRAPHICAL DISTRIBUTION.

The Jacanas are pretty well distributed throughout the globe, and are represented in all its various zoögeographical divisions. Commencing in the far East we find in the Australian Region that the continent of Australia possesses but one species, the *M. gallinaceus*, procured in South Australia, at Port Essington, in Queensland, and the north-eastern portion of New South Wales. This species extends its range into New Guinea and Mysol of the Papuan group of the Austro-Malayan Subregion, and is also found in the Austro-Malayan islands Celebes and Banda, though perhaps the latter may be doubtful. The Oriental Region contains two species, *H. chirurgus* and *M. indicus*, the range of which is very similar, extending through India, as understood, from Cashmere, through Cochin-China and Siam of the Indo-Chinese Subregion, into the Indo-Malay islands of Sumatra, Java and Borneo, and *H. chirurgus* is also found in the Philippines. Ceylon also contains both species, and Formosa of the Oriental Region possesses *H. chirurgus*. The Ethiopian Region contains three species, *M. africanus*, *M. albinucha*, and *A. capensis*. The first extends from Natal on the southeast coast, through the lake regions to Zanzibar on the north, and across the southern portion of the continent through Damara-Land to Senegal on the southwest coast. *A. capensis* is found from Algoa Bay, across the southern portion of Africa, into Damara-Land. Madagascar (Malayan Subregion) contains *M. africanus* and *M. albinucha*.

The Palæarctic Region possesses but one species, *H. chirurgus*, which is met with in the Chinese Empire, where, according to M. David, it passes the summer in the middle provinces. The Nearctic Region has but one species, *J. spinosa*, met with in various parts of the West Indian Islands, and extending southwards through Central America into Colombia of the Neotropical Region. This last region also contains *J. nigra*, which ranges through Central America and Colombia, and *J. jacana*, which is distributed generally over a large portion of South America, being abundant in Trinidad, Venezuela, Brazil, the Argentine Republic, Peru, and Bolivia.

Jacana jacana.

Parra jacana LINN. Syst. Nat. 1766, I, p. 259.—BUFF. Pl. Enl. 322.—GMEL. Syst. Nat. 1788, I, p. 707.—VIEILL. Ency. Méth. 1823, III, p. 1053, pl. 60, fig. 1.—SHAW, Gen. Zool. 1824, desc. and syn. *partim*, nec. pl.—LATH. Ind. Orn. 1790, II, p. 762.—SCLAT. P. Z. S. 1856, p. 282, *partim*.—TAYL. Ibis, 1864, p. 96.—LÉOT. Ois. Trinid. 1866, p. 486.—NITZSCH, Pteryl. 1867, p. 126.—PELZ. Ornith. Bras. 1870, p. 313.—SCLAT. & SALV. P. Z. S. 1873, p. 309.—LAYD. Ibis, 1873, p. 396.—HUDS. P. Z. S. 1876, p. 103.—TACZ. P. Z. S. 1877, p. 329. DURNF. Ibis, 1877, p. 196.—FORBES, P. Z. S. 1881, pp. 642-647; *ib.* Ibis, 1881, p. 359.—WHITE, P. Z. S. 1882, p. 627.—BERL. Ibis, 1884, p. 440.—TACZ. Ois. Per. III, p. 331, *partim*.

Parra intermedia SCLAT. P. Z. S. 1856, p. 282 (ex Venezuela, Verr.).

Jacana spinosa STEJN. Auk, 1885, p. 338.

Adult.—Head, neck, and anterior portion of back black with green and purple reflections. Back and wings bright chestnut. Primaries and secondaries pale greenish yellow, the latter tipped with brown; the former bordered with the same color, confined to the apical half of the outer web, and the typical portion of the inner except on the first primary, which has the entire outer web brown. Flanks dark chestnut; breast dull greenish black. Abdomen and under tail-coverts dull purplish. Rump and upper tail-coverts, purplish chestnut. Tail bright chestnut tipped with black. Frontal and side wattles, together with base of bill, bright red. Remainder of bill yellow. Legs and feet olive. Metacarpal spur extremely sharp. Spurs on shoulder of wing yellow. Total length, 10½; wing, 5½; tail, 2½; bill (culmen), 1¾ inches.

Young.—Top of head brown; a black stripe down back of neck, and one from behind the eye to nape, black. Superciliary stripe yellowish white. Throat, front of neck, and entire underparts white, washed on lower neck and upper part of breast with buff. Back bronzy brown; wings bronze-green with chestnut feathers interspersed, chiefly on the

shoulders and coverts. Primaries and secondaries as in the adults. Rump and upper tail-coverts chestnut. Tail bronzy brown. Frontal and side wattles rudimentary, red. Bill apparently bluish at base of maxilla, remainder yellow. Legs and feet olive. Total length, 9; wing, 5½; tail, 2¼; bill (culmen), 1¼ inches. Specimens vary in size.

HABITAT. Trinidad (Léotaud). Angostura, Venezuela (Umlauff). Parahyba, Brazil (Forbes). Pará (Leyard). Corumbá, Brazil (Smith). Argentine Republic (Hudson). Colombia (Wyatt). Quito, Conadon (Alexander). Peru (Jelski and Stolzmann, Bartlett). Yungas, Bolivia (Rusby).

Linnæus (l. c.) founded this species in 1766, upon the plate 357 in Edwards's drawings called by him, "the Spur-winged Water Hen of Brazil," and gave to it the name of *Parra jacana*, thus employing for his specific term, that of the genus given to these birds by Brisson six years previously, and substituting for that genus the new one *Parra*. The codes of the American and British Ornithologists' Unions have provided, more or less satisfactorily, rules to govern cases when specific names have been elevated to generic rank; and told us what is to be done with such *parvenues*; but neither of them have a word to say as to the proper course of procedure when generic terms are reduced to specific rank, and ornithological nomenclature becomes enriched by such an abominable instance of tautology as exhibited in the name which this, luckily wide-footed, bird is compelled to carry about. Brisson is an accepted authority for genera, and consequently *Jacana* must stand, but I employ Linnæus's specific name under protest, believing that he had no right to willfully ignore the works of previous authors, any more than have ornithologists of the present day, and I think that *jacana* should be rejected as a specific term, and another one substituted. I commend this case to the consideration of the two Unions aforesaid, in order that a similar occurrence may be rendered nugatory in the future, if a way can be found to make it so. Linnæus probably never saw a specimen of *Jacana*, his knowledge of these birds being confined mainly to Edwards's and Brisson's plates and descriptions, and consequently his description of *P. jacana* is very much mixed, and would seem to apply to two species—the *corpus* to *J. nigra* (*Jacana armata nigra* Briss.), the *dorso* to *J. jacana*,

Jacana nigra.

- Parra nigra* GMEL. Syst. Nat. 1788, I, p. 708.—LATH. Ind. Orn. 1790, II, p. 762.—VIEILL. Ency. Méth. 1823, III, p. 1054.
Parra brasiliensis GMEL. Syst. Nat. 1788, I, p. 708.—LATH. Ind. Orn. 1790, II, p. 763.—VIEILL. Ency. Méth. 1823, III, p. 1054.
Parra viridis GMEL. Syst. Nat. 1788, I, p. 708.—LATH. Ind. Orn. 1790, II, p. 763.—VIEILL. Ency. Méth. 1823, III, p. 1055.
Parra hypomelæna G. R. GRAY, Gen. B. 1846, III, pl.—SCLAT. P. Z. S. 1856, p. 283.—SCLAT. & SALV. P. Z. S. 1879, p. 346.
Parra melanopygia SCLAT. P. Z. S. 1856, p. 283.

Adult.—Entire plumage black glossed with green and purple, these hues varying in intensity and brightness among individuals, the purple being usually the most brilliant upon the wings and mantle. Under wing-coverts black. Tail purplish black. Remiges pale greenish yellow, tipped on secondaries, and bordered on primaries with brownish black, the outer web of first primary being entirely of this color. An upright broad wattle divided into two lobes at the base of maxilla, and two narrow, somewhat lengthened, one pendant from either side of base of mandible, bright orange red. Base of bill orange red, remainder bright yellow. Metacarpal spur developed and pointed. Tarsi and feet greenish black. Individuals of this species apparently vary considerably in size, even from the same locality, and also in the amount of purple reflections on the neck and body. Total length, $7\frac{1}{2}$ – $8\frac{1}{2}$; wing, $4\frac{1}{2}$ –5; tail, $1\frac{1}{2}$ –2; tarsus, 2– $2\frac{1}{2}$; bill (culmen), $\frac{3}{4}$ – $1\frac{1}{4}$ inches.

Young.—Top of head brown. Superciliary stripe yellowish white. Stripe from behind the eye, back of neck, and anterior portion of back, rump, and upper tail-coverts black, with a greenish lustre. Throat, neck underneath, and entire underparts, white. Wings bronzy brown. Primaries and secondaries as in the adult. Tail bronzy purple. Bill: frontal wattle yellow; base of maxilla reddish, rest of bill yellow. Legs and feet olive. Total length, $9\frac{1}{4}$ in.; wing, $5\frac{1}{2}$; tail, $1\frac{3}{4}$; bill (culmen), $1\frac{1}{8}$.

HABITAT. Carthagenæ, Mus. Paris (Sclater). Antioquia, Colombia (Salmon). Baranquilla, Colombia (Crowther). Panama (McClellan). St. Martha (Lawrence).

This apparently perfectly valid species, described by the older writers very completely, and named by Gmelin, seems either to have been overlooked by authors generally or else for some inexplicable reason deemed to be the same as the *P. jacana* of Linnæus, which it has nothing to do with, and in no way resembles. Gray figures it in his 'Genera of Birds' as *P. hypomelæna*, but gives no description, and places the *P. nigra* Gmel. in his list as a questionable species! Sclater [l.c.] gives it

another name, *P. melanopygia*, from Santa Martha, Colombia, separating it from both Gray's bird and *P. nigra* of Gmelin, which last he places as a synonym of *P. jacana* Linn., and so it has gone on among writers up to the present day. In no stage of its plumage can it be confounded with *P. jacana* Linn. I also am unable to perceive any difference in specimens from Santa Martha and those from other localities entitling them to separate specific rank, and have consequently placed *P. melanopygia* Sclater among the synonyms of *J. nigra*. Gmelin's description, *capite, collo, cauda et corpore supra nigro*, proves at once that he had not *jacana* in view, for this species has the tail and body above, bright purple chestnut, with the tips of the rectrices a greenish black. Gmelin's synonym is the *Jacana armata nigra* Brisson, Av. Vol. V, p. 124, No. 3, where an elaborate and complete description of *P. nigra* is given.

Jacana spinosa.

Fulica spinosa LINN. Syst. Nat. 1758, p. 152 (immature).

Parra variabilis LINN. Syst. Nat. 1766, p. 260 (imm.).—GMEL. Syst. Nat. 1788, I, p. 708. — LATH. Ind. Orn. 1790, II, p. 763. — VIEILL. Ency. Méth. 1823, p. 1055, pl. 60, No. 2.

Parra jacana SHAW (*nec*. LINN.), Gen. Zool. 1824, p. 263 (desc. and syn-*partim*), pl. 32.

Parra gymnostoma WAGL. Isis, 1832, p. 517.—GRAY, Gen. B. 1846, III, p. 589. — SCLAT. P. Z. S. 1856, p. 283. 1857, p. 206. 1858, p. 360, 1860, p. 393.—MOORE, P. Z. S. 1859, p. 64. — SCLAT. & SALV. Ibis, 1859, p. 231. — TAYLOR, Ibis, 1860, p. 314. — SCHLEG. Mus. Pays-B. Ralli, 1865, p. 66. — SALV. Ibis, 1870, p. 116. — WYATT. Ibis, 1871, pp. 116, 383. — MERRILL, Bull. Nutt. Orn. Club, 1876, I, p. 88. — FORBES, P. Z. S. 1881, pp. 642, 646.—SALV. P. Z. S. 1883, p. 428.—BAIRD, BR. & RIDG. W. B. N. A. 1884, I, p. 176. — CORY, B. Hait. & San. D. 1885, p. 159, pl.—RIDG. Man. B. 1887, p. 183.

Parra cordifera LESS. Rev. Zool. 1824, p. 135.—DES MURS, Icog. Orn. p. 849, pl. 42.

Parra violacea CORY, Bull. Nutt. Orn. Club, 1881, VI, p. 130.

Adult.—Head, neck, upper part of back and breast, black, with green and purple reflections. Back and wings purplish chestnut. Rump, upper tail-coverts, and tail dark purple. Lower portion of breast and flanks dull maroon. Abdomen, thighs and under tail-coverts dull brownish maroon. Primaries and secondaries pale yellowish green, bordered on the first with blackish brown; this color including the entire outer web of the first two primaries, the secondaries being only tipped with blackish brown. Frontal leaf or wattle divided into three lobes on top, broad above, narrowing to

where it joins the forehead, yellow in skin, probably red or orange in life. Base of mandible bluish white, with a space of carmine between it and the wattle; rest of bill bright yellow. Metacarpal spur large and sharp at point. Legs and feet dull olive. Total length, 9; wing, 5-5½; tail, 2¼; bill, 1½; tarsus, 2½ in.

Young.—Top of head and nape pale brown, a superciliary yellowish white stripe from base of maxilla to nape of neck. A black stripe from behind the eye, narrow at first, but widening as it proceeds, passes down the side of neck, and crosses the upper part of back. Chin, throat, sides and front of neck and entire underparts white, with a strong buff tinge on the upper part of breast. Back and wings pale bronzy brown. Primaries and secondaries like the adult, with slightly more brown on the primaries. Rump and upper tail-coverts purple. Tail purplish black. Frontal wattle rudimentary. Bill yellow, blue at base. Feet and legs olive.

HABITAT. Haiti (Cory). Cuba (Cory). Texas (Merrill). Mexico (De Oca, Markham, Sumichrast). Guatemala (Leyland). Costa Rica (Salvin). Honduras (Taylor). Yucatan (Gaumer). Carthagena, Colombia (Edwards, Sclater).

In 1758 Linnæus gave to the bird from Carthagena represented in plate 48 of Edwards's 'Natural History of Birds,' the name of *Fulica spinosa*. In 1760 Brisson placed this bird among the synonyms of his "Chirugien varié," and some more allied to it, in the genus *Jacana*. In 1766 Linnæus in his 12th edition, disregarding all that had been done before with this species, both as to other authors and his own writings as well, gave the bird of Edwards's plate 48 the specific name of *variabilis*, and placed it in his genus *Parra*, manufactured for the occasion, ignoring the prior claims of Brisson in the premises. That Edwards's plate represents the *P. gymnostoma* auct., and not *P. jacana* auct., is evidenced by both the colored figure and the description, as the latter states that the frontal wattle, or as he calls it, the 'loose flap,' is "scalloped with three scollops on the tip," and his plate shows this, and there is no indication of any side wattles at base of bill. The wattle of *P. jacana* is bi-lobed, and there are pendent side wattles, even in young birds. This is the history of this species up to 1766, and of the way it received its baptism. Now what name must it bear? Those who adhere to the 1758 edition of Linnæus say *spinosa*; those who prefer the 1766 say *variabilis*. I have begun with 1758, not that I am altogether satisfied that it is the proper one, for when an author studiously ignores his own previous writings and consolidates

himself, so to speak, as Linnæus does, in his 12th edition, I do not see that any ornithologist should be troubled about earlier dates so far as Linnæus is concerned. But in this instance (as it is a moot question among ornithologists as a class, which edition should have priority), the name *spinosa* means something when applied to a Jacana, and *variabilis* does not, and so I have adopted it. In this 12th edition, there is no mention made of *Fulica spinosa*, either in that genus, or as a synonym of *Parra*, its author having apparently decided to obliterate it entirely.

Specimens of this bird from Cuba and Haiti agree precisely with examples from Mexico and Central America, and therefore *P. violacea* Cory will have to become a synonym.

Metopidius indicus.

Indian Jacana LATH. Syn. Suppl. p. 257.

Parra indica LATH. Ind. Ornith. 1790, p. 765.—VIEILL. Nouv. Dict. Hist. Nat. 1817, p. 447; *ib.* Ency. Méth. 1823, p. 1056.—SCHLEG. Mus. Pays-B. Ralli 1865, p. 67.—SALVAD. Ucc. Born. 1874, p. 343.—INGLISS, Str. Feath. 1877, p. 46.—HUME & DAVISON, Str. Feath. VI, 1878, p. 464.—CRIPPS, Str. Feath. VIII, 1879, p. 304.—BUTL. Str. Feath. IX, 1880, p. 430.—LLOYD, Ibis, 1882, p. 470.

Parra cuprea VAHL. Shriest. Naturh. Selsk. 1793, II, 2, p. 51.

Parra cristata VIEILL. Nouv. Dict. Hist. Nat. 1817, p. 450; *ib.* Ency. Méth. 1823, p. 1055.

Parra ænea CUV. Règ. Anim. 1817, I, p. 498; *ib.* Règ. Anim. 1829, I, p. 535, —LESS. Trait. Ornith. 1831, p. 539.—NITZSCH, Pteryll. 1867, p. 126. —FORBES, P. Z. S. 1881, p. 640.

Parra superciliosa HORSEF. Trans. Linn. Soc. XIII, 1821, p. 194; *ib.* Zool. Res. pl. 64 (1824).

Metopidius æneus WAGL. Isis, 1832, p. 279.

Hydralector cristatus WAGL. (*nec* VIEILL.), Isis, 1832, p. 280.

Parra atrata TICK. Jour. Asiat. Soc. Beng. 1833, II, p. 582.

Parra melanochloris VIEILL. Gal. Ois. 1834, II, pl. 264.

Parra melanoviridis VIEILL. Gal. Ois. 1834, II, p. 164.

Metopidius indicus BLYTH, Cat. B. Mus. Asiat. Soc. Beng. 1849, p. 273. —JERD. B. Ind. 1862, p. 708.—HUME, Nests and Eggs Ind. B. 1873, p. 591.—OATES, B. Brit. Burm. 1883, p. 358.

Adult.—Head, neck, breast, flanks, abdomen and thighs rich dark green, glossed in certain lights with purple reflections. Chin white. A broad white stripe extends from above the eye to the nape. Back and wings pale greenish bronze, this color separated on the back from the dark green of the neck by a line of bright purple. Lower back, rump, upper and under tail-coverts maroon. Tail chestnut. Outer secondaries black on

inner, bronze on outer webs; innermost ones all bronze. Primaries black with a green gloss. Frontal shield and basal half of maxilla, blue, with a rose-colored spot on either side; remaining portion of maxilla and the entire mandible yellowish green. Metacarpal spur small and blunt. Legs and feet bluish slate color. The bill, according to Oates, varies considerably in color in different individuals. Total length, $10\frac{1}{2}$; wing, $6\frac{3}{4}$; tail, $2\frac{1}{4}$; tarsus, $2\frac{1}{2}$; bill along culmen, $1\frac{1}{2}$ in.

Young.—Upper part of head chestnut; eyebrow brownish white; back of neck purplish green; sides of head, chin and throat white; front and sides of neck and upper part of breast bright buff; lower breast, abdomen and under tail-coverts white. Under wing-coverts and flanks purplish black. Back and wings pale bronze green. Rump and upper tail-coverts maroon. Tail has median rectrices bronze; remainder pale chestnut, barred diagonally with greenish black and bordered with white. The young is stated not to assume the adult plumage until the second spring moult.

HABITAT. India, Indo-Burmese Countries, Siam, Cochinchina (Oates), Ceylon (Temminck), Java (Horsfield), Sumatra? Borneo? (Salvadori).

Oates states that this species is spread over a greater part of India, Indo-Burmese countries, Siam and Cochinchina. It has the habits of the Water Hens, frequents swamps and ponds that are covered with floating plants, over which it easily walks. As a rule it is very tame, and takes wing reluctantly. It breeds in the rainy season, and the eggs, usually six in number, are pale buff, thickly covered with tangled black lines.

Metopidius albinucha.

Parra albinucha GEOFF. ST. HIL. Mag. Zool. 1832, cl. II, pl. 6.—ROCH & NEWT. Ibis, 1863, p. 172.—E. NEWT. Ibis, 1863, p. 458.—SCHLEG. Mus. Pays-B. Ralli, 1865, p. 70; *ib.* P. Z. S. 1866, p. 425.—POLL. & VAN DAM. Rech. Faun. Mad. 1868, p. 136.—FINSCH & HARTL. Vög. Ost. Afr. 1870, p. 783.—HARTL. Vög. Madag. 1877, p. 352.
Parra atricollis SWAINS. Anim. Menag. 1838, p. 334, sp. 160.

Adult.—General plumage of the body cinnamon brown; nape and sides of head, throat and front of neck black; back of neck white. Front of head bare, bluish black. Wings cinnamon brown like the body, primaries black with a greenish gloss. Upper tail-coverts white. Tail reddish cinnamon, tips of middle rectrices greenish black. Bill bluish black at base, inclining to horn color at the tip. Feet and tarsi apparently a bluish black. Wing, $6\frac{1}{2}$ in.; tail, $2\frac{1}{2}$ in.; bill, $1\frac{1}{4}$ in.

HABITAT. Madagascar (St. Hilaire, Hartlaub).

Metopidius africanus.

- Parra africana* GMEL. Syst. Nat. 1788, p. 709.—VIEILL. Nouv. Dict. Hist. Nat. 1817, p. 447.—LESS. Trait. Ornith. 1831, p. 539.—SWAIN. Zool. Illus. 1831-32, pl. 6.—G. R. GRAY, Gen. B. 1846, p. 589.—HEUGL. Syst. Ueb. Vög. N. O. Afrik. (1885), p. 255.—KIRK, Ibis, 1864, p. 334.—MONTEIRO, P. Z. S. 1865, p. 90.—SCHLEG. Mus. Pays-B. Ralli, 1865, p. 69; *ib.* P. Z. S. 1866, p. 425.—NITZSCH, Pteryl. 1867, p. 126.—POLL. & VAN DAM. Rech. Faun. Madag. 1868, p. 137.—GRAY, Handl. B. 1871, p. 70.—ANDERS. B. Damar-L. 1872, p. 328.—GARROD, P. Z. S. 1873, pp. 469, 641; 1875, p. 348.—HEUGL. Orn. Nord. Ost. Afr. (1873), No. 825.—HARTL. Vög. Madag. 1877, p. 354.—FINSCH & HARTL. Vög. Ost. Afr. 1870, p. 781.—FORBES, P. Z. S. 1881, pp. 640-642.—LAYD. B. S. Af. 1884, p. 649.
- Metopidius africanus* WAGL. Isis, 1832, p. 279.

Adult.—Front and top of head bare, in life bluish black; back of head and neck black tinged with green; throat, sides of head and front of neck white, passing into golden yellow on the upper part of the breast; entire plumage of the body bright cinnamon brown, divided on the under surface from the golden hue of the chest by a narrow dark line. Tail dark cinnamon red, tips of rectrices greenish bronze. Wings reddish cinnamon, primaries purplish brown, tips greenish. Metacarpal spur small and blunt. Bill bluish black, pinkish at the tip; tarsi and feet ash color. Total length, 10 in.; wing, 6; tail, 1 $\frac{1}{4}$.

HABITAT. Senegal, Gambin, Gold-coast, Gaboon, Benguela, Damara-Land (Heuglin). Coroca River, Mossamedes, Humbé (Anchieta). Okovango, Teonghe, and Boetle Rivers (Andersson). Lake Nzami (Andersson). Natal (Ayres). Algoa Bay, Mozambique (Heuglin). Zambesi (Kirk). Madagaska, Zambesi (Kirk).

Andersson says he never saw this species in Great Namaqua Land, and that it is scarce in Damara-Land, but common at Lake Nzami and the Okovango River. It goes in pairs or small flocks, has a lively disposition, and is generally easy of approach. In Natal, according to Ayres, it is found in considerable numbers in the lagoons and pools. Their food consists entirely of the seeds of plants and small insects.

Aphalus capensis.

- Parra capensis* SMITH, Birds S. Afr. 1849, pl. 32.—ANDERSS. P. Z. S. 1864, p. 7.—AYRES, Ibis, 1864, p. 360.—GURN. Ibis, 1864, p. 360.—ANDERSS. B. Damara-L. 1872, p. 330.—LAYD. B. S. Afr. 1884, p. 649.

Forehead yellow, superciliary stripe white; crown and nape, together with a narrow bar on side of neck at base, sides of the body and tail, dark reddish orange; back of neck purplish black; sides of neck and breast greenish yellow, chin, throat, breast, belly and under tail-coverts, white. Wings and back grayish brown. Metacarpal spur, small and blunt. Bill yellowish brown. Legs and feet greenish yellow. Total length, 7½; wing, 3¾; tail, 1 5-6.

HABITAT. South Africa, Natal (Ayres). Damara-Land (Andersson). Algoa Bay (Smith).

This species, described by Sir Andrew Smith (l. c.) is smaller than its relative the *M. africana*, and dwells in similar localities. In Natal, Mr. Ayres found them abundant on Sea Cow Lake, and if they approached any of the larger species they were immediately chased away, and there was constant squabbling between them. One habit this bird possesses is peculiar, that of dipping the head up and down like some of the small Plovers. Like *M. africana*, Andersson says, it does not occur in Great Namaqua-Land, is rare in Damara-Land, but common in the Lake regions, and on the Okovango, where it breeds.

As this species has the head fully feathered it cannot very well be placed in the genus *Metopidius*, with *albinucha* and *africanus*, which have the top of the head more or less bare of feathers, and I have therefore proposed the term *Aphalus* (ἄφαλος) for it, with the following characters. Head completely feathered. No wattles or fleshy crest upon the head. First and second primaries longest, third, fourth and fifth equal. Closed wing reaches to near the tip of tail. Tarsi strong and short. Bill straight, slender, wedge-shaped at tip.

Hydralector gallinaceus.

Parra gallinacea TEMM. Plan. Col. pl. 464.—LESS. Trait. Ornith. 1831, p. 539.—GOULD, B. Austr. IV, pl. 75; *ib.* Hand. L. B. Austr. 1865, II, p. 330.—G. R. GRAY, Gen. B. 1046, III, p. 589; *ib.* P. Z. S. 1860, pp. 365, 438.—RAMSAY, Ibis, 1867, p. 417, pl. 8, f. 3, egg.—D'ALBERT. P. Z. S. 1875, p. 530; *ib.* Ann. Mus. Civ. Gen. 1875, VIII, p. 799.—RAMSAY, P. Z. S. 1847, p. 344; *ib.* Proc. Linn. Soc. N. S. W. 1877, II, p. 199.

Hydralector gallinaceus WAGL. Isis, 1832, p. 280.—WALD. Trans. Zool. Soc. 1872, VIII, p. 92.—MEYER, Ibis, 1879, p. 141.—FORBES, P. Z. S. 1881, p. 647.—SALVAD. Orn. Pap. e Moll. 1882, II, p. 308.

Hydralector cristatus REICH. (*nec* VIEILL). Syn. Av. Ras. 1848, pl. 112.

figs. 1126-29.—G R. GRAY, Handl. B. 1871, II, p. 70.—GARROD, P. Z. S. 1873, p. 34.

Parra cristata SCHLEG. (*nec* VIEILL.) Mus. Pays-B. Ralli, 1865, p. 68.—SHARPE, Trans. Linn. Soc. 1877, XII, p. 505.

Parra novæ-guinææ RAMSAY, Trans. Linn. Soc. N. S. W. 1878, II, p. 298, 1879, IV, p. 102.—SALVAD. Ibis, 1879, p. 327.

Adult.—Top of head, occiput, and stripe down the back of the neck, narrow line over upper part of back at base of neck. breast, flanks and under wing-coverts, black. Throat white. Sides of head and neck, as well as the neck in front, golden yellow. Spot from eye to base of mandible black. Back and wings pale, shining, grayish olive. Primaries greenish black. Rump and upper tail-coverts grayish olive, feathers tipped with black. Abdomen, thighs and under tail-coverts white. Tail dark olive green, almost black in certain lights. Forehead covered by a naked shield, having a central, horizontal, flat, keel-shaped membrane, extending from its posterior limits along the culmen nearly to the nostrils. This, together with the basal two thirds of the bill, is yellow in skin (aurorared, according to Gould, in life); apical third of bill blackish brown. Metacarpal spur small and blunt. Legs and feet olive. Gould says that the "forepart of tibia is red with a mixture in patches of yellow and greenish-gray." There is no indication of this in the specimens before me. Total length, 9 in.; wing, 5½ in.; tail, 2 in.; bill, 1¼ in. Young have entire under surface white; head and occiput, reddish chestnut; back, reddish brown.

HABITAT. Celebes (Meyer, von Rosenberg), Banda (G. R. Gray), Mysol (Wallace), Yule Island, Naiabui, New Guinea (D'Alberty), Port Essington, Austr. (Gould), Queensland, Northeastern New South Wales (Ramsay).

Specimens from New Guinea, according to Ramsay, differ somewhat, especially in the darker color of the wings; but, as Salvadori says, examples from New Guinea and Australia resemble typical ones from Celebes, and the differences of certain individuals are not sufficient to constitute a specific separation. He concludes his remarks, however, by mortgaging the Australian bird, by saying, that if it is deemed necessary to impose a new name upon it, he suggests *Hydralector novæ-hollandiæ*. The evidence presented to me by the specimens at my command does not render it necessary that this mortgage should be foreclosed as yet.

Hydrophasianus chirurgus.

Le chirurgien de l'Isle de Luçon, SONN. Voy. Nov. Guin. 1776, p. 82, pl. 45.

Tringa chirurgus SCOP. Del. Flor. Faun. Insub. 1786, p. 92 (ex SONN.).

- Parra luzoniensis* GMEL. Syst. Nat. 1788, I, p. 709, No. 13.—VIEILL. Ency. Méth. 1823, p. 1057.
- Parra sinensis* GMEL. Syst. Nat. 1788, I, p. 709, No. 15.—LESS. Trait. Orn. 1831, p. 539.—SCHLÆG. Mus. Pays-B. 1865, p. 71.—NITZSCH. Pteryl. 1876, p. 126.—VIEILL. Gal. Ois. 1834, p. 165, pl. 265.—DAVID & WEND. Str. Feath. 1878, VII, p. 89.—KELHAM, Ibis, 1882, p. 185.
- Hydrophasianus sinensis* WAGL. Isis (1832) p. 270.—HEND. & HUME, Lahore to Yark. 1873, p. 290.—BLYTH, B. Brit. Burmah, 1875, p. 157.
- Parra phœnicura* HODG. Gray's Zool. Misc. p. 86.
- Hydrophasianus chirurgus* BLYTH, Cat. B. Mus. Asiat. Soc. Beng. 1849, p. 273.—JERD. B. Ind. 1864, III, p. 709.—HUME, Nest and Eggs Ind. B. 1873, p. 592.—SALVAD. Ucc. Bor. 1874, p. 343.—HUME & DAVISON, Str. Feath. VI, 1878, p. 464.—BALL, Str. Feath. VII, 1878, p. 229.—CRIPPS, Str. Feath. VII, 1878, p. 304.—DOIG, Str. Feath. VII, 1878, p. 371.—DAVID & OUST. Ois. Chine, 1877, p. 483.—LEGGE, B. Ceyl. 1880, II, p. 914.—FORBES, P. Z. S. 1881, pp. 640, 642.—OATES, B. Brit. Burm. 1883, p. 360.—MURR. Vert. Zool. Scinde, 1884, p. 259.

Adult.—Head, throat, and front of neck white. Nape black; hind part of neck bright golden yellow, separated from the white in front by a narrow black line. Back shining purplish brown, entire underparts purplish black. Rump, upper and lower tail-coverts, and tail blackish brown. Four median rectrices greatly lengthened. Wings have scapulars and tertials dark olive brown; upper and under wing-coverts, and secondaries white, the tips of the outer secondaries being brownish black. First primaries black; second black with a large part of the basal half of inner web white; third nearly all white on inner web, and the remaining ones all white save the tips, which are brownish black. First primary for about an inch from the tip is bare, with a narrow web at the end; next two with the shafts extending beyond the web; the remainder attenuated at the tip, diminishing in length as the innermost primary is reached. Metacarpal spur developed, sharp. Bill light blue at base, tip greenish. Legs and feet plumbeous blue. Claws black. Iris deep brown. Total length, 18-21; wing, 8-9½; tail, 11-12½; middle toe and claw, 3-3½; bill at gape, 1½ in.

Winter plumage.—Top of head and centre of hind neck, back, scapulars and tertials, hair-brown, with green and some bronze reflections on the back. Lesser and greater wing-coverts pale brown, the feathers barred with blackish brown and white toward the tips; rest of wing as in breeding plumage. A white stripe extends from the base of the bill over the eye; a black one runs from the gape through the eye and down the sides of the neck, terminating in a band across the chest. A shining golden stripe, continuous with the superciliaries, extends down the sides of the neck, behind this black one. Throat and front of neck and entire under surface pure white. Some feathers on flanks mottled with brown. Rump

and central tail-feathers moderately lengthened, hair-brown, darkest on the rump; rest of tail white.

HABITAT. Java, Borneo and Philippines (Oates). Formosa (Swinhoe). Java (Diard). Borneo (Salvadori). Ceylon (Legge). — India, as far as Scinde and Cashmere, Ceylon, China, Cochin-China, Malay Peninsula (Oates).

This state of plumage is frequently regarded as that of the immature bird; but these differ, according to Legge, by having a ferruginous stripe over the eye, front neck fulvous, the golden neck stripe paler, and a less developed chest band. The breeding plumage appears to be assumed by the feathers changing color, and not by a moult. In Chinese examples sometimes the hind neck golden patch is very large and the black border very broad. According to Hume, this is a shy species, running with wonderful facility over the floating weeds, lotus leaves, etc., and when alarmed, concealing itself by lying close to the plants, with its head and neck stretched out on a level with the body; sometimes, when possible, it will sink half of its body in the water. It is also an expert diver. It breeds from June to about the middle of September, according to locality. The nest, nearly two feet in diameter, is made of weeds and roughly put together, sometimes placed on the surface of the water, or on an island close to the water. The eggs, four in number, vary in color from pale brown to a deep rufous, and are covered with tangled lines of blackish, or reddish brown. The shell has a very lustrous appearance.



A NEW FORM OF CLAPPER RAIL.

BY GEORGE B. SENNETT.

***Rallus longirostris scottii*, subsp. nov. SCOTT'S RAIL.**

The darkest of all the large Rails. Prevailing color on back very dark brown or black. This color prevails to such an extent that in most adults little notice would be taken of the olive gray edgings. Underparts also darker and with much less cinnamon than others of the genus. Flanks